



Mr. James Saric
Remedial Project Manager
USEPA Region 5
77 West Jackson Boulevard (SR-6J)
Chicago, IL 60605-3507

ARCADIS
10559 Citation Drive
Suite 100
Brighton
Michigan 48116
Tel 810.229.8594
Fax 810.229.8837
www.arcadis-us.com

Subject:

Kalamazoo River SRI Proposed Phase 2 Sediment Core Analyses

INDUSTRIAL

Dear Mr. Saric:

In fall of 2007, a total of 16 new transects in the Kalamazoo River were probed and cored as part of the Phase 1 investigation outlined in Sections 3.4.1.1 and 3.4.1.2 of the Supplemental Remedial Investigation/Feasibility Study Work Plan – Morrow Dam to Plainwell (Area 1 SRI/FS Work Plan) (ARCADIS BBL 2007a). Ten of these transects were located between the former Georgia-Pacific Mill and the Crown Vantage Landfill, with the remaining six transects between the Plainwell No. 2 Dam and Mill Race Confluence. A total of 118 cores from this effort were photographed, classified as fine or coarse sediments, and are currently in frozen storage. The cores are described in the Kalamazoo River Area 1 SRI Phase 1 Data Report (Phase 1 SRI Data Report) (ARCADIS 2008).

As outlined in the Area 1 SRI/FS Work Plan, the list of sediment cores selected for laboratory analysis must be approved by USEPA. This letter proposes a core analysis plan for USEPA review.

Core Selection for Analysis

Between the former Georgia-Pacific Mill and the Crown Vantage Landfill, sediment probing and core collection was performed at 8 locations along each of 10 transects. The Area 1 SRI/FS Work plan states that approximately 30 cores from this area (an average of 3 cores per transect) will be selected for laboratory analysis.

From the Plainwell No. 2 Dam area and the Mill Race confluence, sediment probing and core collection was performed at 8 locations along each of 6 transects. The Area 1 SRI/FS Work Plan calls for approximately 18 cores to be analyzed from this area.

The Area 1 SRI/FS Work Plan specifies that approximately 75% of selected cores will be from fine-grained sediments, with the remaining 25% from coarse sediments.

Date:

June 10, 2008

Contact:

Michael J. Erickson

Phone:

810.225.1924

Email:

michael.erickson@
arcadis-us.com

Our ref:

B0064539.500

Because relatively few probing locations were classified as fine-grained in Phase 1 activities, the proposed selection of cores (as outlined below) results in 63% from fine-grained sediments and 37% from coarse-grained sediments between the Georgia-Pacific Mill to the Crown Vantage Landfill, and 28% from fine-grained sediments and 72% from coarse-grained sediments from the Plainwell No. 2 Dam to the Mill Race Confluence.

All cores classified as fine-grained are included for analysis; a total of 19 cores between the Georgia-Pacific Mill and the Crown Vantage Landfill. Coarse-grained sediments encompass the remaining 37% of core locations, and were selected in an effort to evenly distribute cores selected for analysis along this reach of the River. Table 1 summarizes the selected cores by river reach, and Table 2 lists the selected cores. Figures 1 and 2 show the locations and classifications of cores selected for analysis.

As specified in the Area 1 SRI/FS Work Plan, sediment samples from two of the cores (determined as approved by USEPA) will be submitted for laboratory analysis of Total Compound List/Total Analyte List (TCL/TAL) constituents, and the surficial interval from these cores will also be analyzed for SEM/AVS. Core locations KRT2-6 and KRT9-8 are proposed for TCL/TAL and SEM/AVS analysis. These cores were selected from the upper and lower ends of the River reach between the Georgia-Pacific Mill and Crown Vantage Landfill and are denoted on Table 2.

Plainwell No. 2 Dam to Mill Race Confluence

As with the previous River reach, all core locations where sediments were described as fine-grained are selected for analysis. Between the Plainwell No. 2 Dam and the Mill Race confluence, 5 locations (28% of the cores selected) with this classification are proposed for analysis. Coarse-grained sediments encompass the remaining 72% of cores selected. Table 3 displays a breakdown of the selected core locations by river reach, and Table 4 provides a summary of cores selected for analysis. Figure 3 shows the locations and classifications of cores selected for analysis.

Sediment samples from two of the cores (determined as approved by USEPA) will be submitted for laboratory analysis of TCL/TAL constituents, and the surficial interval from these cores will also be analyzed for SEM/AVS. Core locations KRT13-8 and KRT16-8 are proposed. These cores were selected from the upper and lower ends of the River reach between the Plainwell No. 2 Dam to the Mill Race Confluence and are denoted on Table 4.

All sediment cores will be processed and analyzed in accordance with the methods and protocols in the USEPA-approved Area 1 SRI/FS Work Plan and the Multi-Area Field Sampling Plan (ARCADIS BBL 2007b).

Contingent on USEPA approval of this plan, ARCADIS will provide a schedule of for core sectioning activities to USEPA.

Sincerely,

ARCADIS



Michael J. Erickson, P.E.
Associate Vice President

Copies:

Paul Bucholtz, MDEQ
Jeff Keiser, CH2M HILL
Michael Scoville, ARCADIS
Mark Brown, PhD, Georgia-Pacific Corporation
L. Chase Fortenberry, P.G., Georgia-Pacific Corporation
David Guier, Millennium Holdings, LLC

Enclosures:

Tables

Table 1 – Core Location Breakdown – Georgia-Pacific Mill to Crown Vantage Landfill

Table 2 – Core Locations Selected for Analysis – Georgia-Pacific Mill to Crown Vantage Landfill

Table 3 – Core Location Breakdown – Plainwell No. 2 Dam to Mill Race Confluence

Table 4 – Core Locations Selected for Analysis – Plainwell No. 2 Dam to Mill Race Confluence

Figures

Figure 1 – Sediment Samples to be Analyzed for Total PCBs – Georgia-Pacific Mill to Portage Creek

Figure 2 – Sediment Samples to be Analyzed for Total PCBs – Portage Creek to Crown Vantage Landfill

Figure 3 – Sediment Samples to be Analyzed for Total PCBs – Upstream of Plainwell No. 2 Dam to Mill Race Confluence

References

ARCADIS BBL. 2007a. *Supplemental Remedial Investigation/Feasibility Study Work Plan – Morrow Dam to Plainwell*. February 2007.

ARCADIS BBL. 2007b. *Multi-Area Field Sampling Plan*. October 2007.

ARCADIS. 2008. *Technical Memorandum – Kalamazoo River Area 1 SRI Phase 1 Data Report*. April 2008.

**Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Kalamazoo River SRI Proposed Phase 2 Sediment Core Analyses**

Table 1 - Core Location Breakdown - Georgia-Pacific Mill to Crown Vantage Landfill

River Interval	Transects	# Fine	# Coarse
Georgia-Pacific Mill to Portage Creek	KRT1 - KRT2	3	3
Portage Creek to Mosel Avenue	KRT3 - KRT6	9	3
Mosel Avenue to Crown Vantage	KRT7 - KRT10	7	5
	Total	19	11
		63%	37%

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**Table 2 - Core Locations Selected for Analysis - Georgia-Pacific Mill to
Crown Vantage Landfill**

River Interval	Sample ID	Sediment Classification	Distance from Right Bank (ft)	Core Length (ft)
Georgia-Pacific Mill to Portage Creek	KRT1-4	Coarse	102	0.45
	KRT1-6	Coarse	170	1.4
	KRT2-2	Coarse	36	2.7
	KRT2-6	Fine ⁽¹⁾	180	2.3
	KRT2-7	Fine	216	0.9
	KRT2-8	Fine	249	3.1
	KRT3-1	Fine	0	1.1
Portage Creek to Mosel Avenue	KRT3-4	Coarse	60	0.8
	KRT3-8	Fine	139	2.2
	KRT4-2	Fine	21	4.5
	KRT4-5	Coarse	84	1.3
	KRT4-8	Coarse	144.4	1.7
	KRT5-1	Fine	0	2
	KRT5-3	Fine	34	4.1
	KRT5-4	Fine	51	2.7
	KRT6-2	Fine	28	2.9
	KRT6-7	Fine	168	1.9
	KRT6-8	Fine	194	1.4
	KRT7-1	Fine	0	1.9
Mosel Avenue to Crown Vantage	KRT7-5	Coarse	104	0.8
	KRT8-1	Fine	0	0.9
	KRT8-2	Fine	35	1.2
	KRT8-5	Coarse	140	2.7
	KRT8-8	Coarse	246	1.8
	KRT9-2	Fine	18	0.95
	KRT9-5	Coarse	72	1.3
	KRT9-8	Fine ⁽¹⁾	123	0.4
	KRT10-1	Fine	0	2.4
	KRT10-2	Fine	33	0.7
	KRT10-5	Coarse	132	1.8

Note:

1. Core location proposed for TCL/TAL and SEM/AVS analysis.

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Table 3 - Core Location Breakdown - Plainwell No. 2 Dam to Mill Race Confluence

River Interval	Transects	# Fine	# Coarse
Kalamazoo River	KRT11 - KRT13	4	5
Mill Race	KRT14 - KRT 15	0	6
Mill Race Confluence	KRT16	1	2
	Total	5	13
		28%	72%

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**Table 4 - Core Locations Selected for Analysis - Plainwell No. 2 Dam to
Mill Race Confluence**

River Interval	Sample ID	Sediment Classification	Distance from Right Bank (ft)
Kalamazoo River	KRT11-1	Coarse	0
	KRT11-5	Fine	55
	KRT11-8	Coarse	96
	KRT12-1	Fine	0
	KRT12-4	Coarse	55.5
	KRT12-8	Fine	130
	KRT13-1	Coarse	0
	KRT13-5	Coarse	68
	KRT13-8	Fine ⁽¹⁾	118
Mill Race	KRT14-1	Coarse	0
	KRT14-5	Coarse	46
	KRT14-7	Coarse	69
	KRT15-1	Coarse	0
	KRT15-4	Coarse	25.5
	KRT15-8	Coarse	59
Mill Race Confluence	KRT16-1	Coarse	0
	KRT16-6	Coarse	175
	KRT16-8	Fine ⁽¹⁾	248

Note:

1. Core location proposed for TCL/TAL and SEM/AVS analysis.